

STEREO CONTROL AMPLIFIER  
**KC-209**

# INSTRUCTION MANUAL

KENWOOD CORPORATION

# Introduction

Your choice of this product indicates that you are a devotee to excellence in sound reproduction.

We appreciate your patronage and take pride in the long tradition of quality components that our company represents.

So that you can get the most out of your unit, we suggest that you take the time to read through this manual before you hook up and operate your system. This will acquaint you with operating features and system-connection considerations so that your listening pleasure will be enhanced right from the start. You will notice that in all aspects of planning, engineering, styling, operating convenience and adaptability we have sought to anticipate your needs and desires.

**Keep this manual handy for future reference.**

## For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model \_\_\_\_\_ Serial Number \_\_\_\_\_

## Unpacking

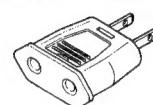
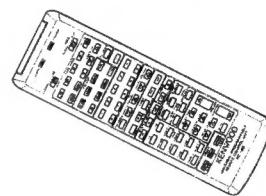
Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.

Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

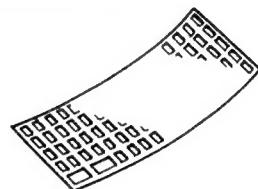
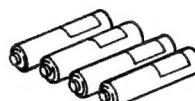
### Accessories

Remote control unit ..... 1  
AC plug adaptor ..... 1  
(except for some areas)  
For the unit with a European AC  
plug in areas other than Europe.

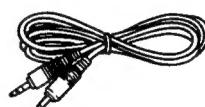
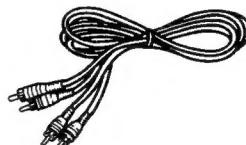


Overlay sheet ..... 1

Battery ("AAA" or "R03") ..... 4



Audio cord ..... 1 System control cord ..... 1



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**⚠ Caution: Read this page carefully to ensure safe operation.**

## Before applying power

### For the U.S.A. and Canada

#### Important!

Units shipped to the U.S.A. and Canada are designed for operation on 120 volts AC only.

#### Safety precaution for a Polarized AC plug

However, some products may be supplied with a non-polarized plug.

**CAUTION:** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

### For the United Kingdom

#### Important!

Units shipped to the U.K. are designed for operation on 240 volts AC only.

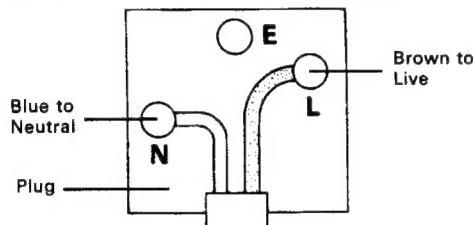
The mains plug must be removed from the wall socket prior to any internal examination.

The wires in this mains lead are coloured in accordance with the following code:

Blue ..... Neutral  
Brown ..... Live

The wires in this mains lead must be connected to the terminals in the plug as follows:

**Wire colour**                            **Plug terminal marking**  
Blue ..... N or Black  
Brown ..... L or Red



**Notes:**

- If a 13-amp plug is used, this must be fitted with a 5-amp fuse.
- If a 3-pin plug with earthing contact is used, no wire must be connected to the E terminal.

### For Australia and Europe

#### Important!

Units shipped to Australia are designed for operation on 240 V AC only.

Units shipped to Europe are designed for operation on 220 V AC only.

### For other countries

#### Important!

Units shipped to countries other than the above countries are equipped with an AC voltage selector switch on the rear panel. Refer to the following paragraph for the proper setting of this switch.

#### AC voltage selection

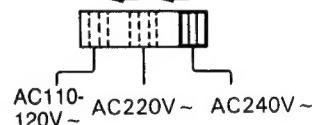
This unit operates on 110-120 or 220-240 volts AC. The AC voltage selector switch Type A or Type B on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

**Note:**

Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

#### AC voltage selector switch

**Type A**



**Type B**



Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

## Safety precautions

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN		CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
	THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.		
	THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.		

# IMPORTANT SAFEGUARDS

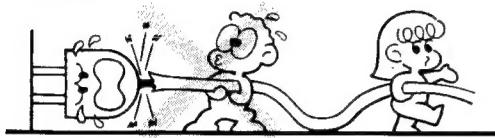
**Caution : Read this page carefully to ensure safe operation.**

Please read all of the safety and operating instructions before operating this unit. For best results, follow all warnings placed on the unit and adhere to the operating and use instructions. These safety and operating instructions should be retained for future reference.

**1. Power sources** — The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

**2. Power-cord protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

Never pull or stretch the cord.

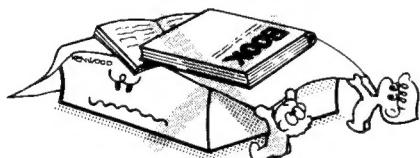


**3. Grounding or polarization** — The precautions should be taken so that the grounding or polarization means of this unit is not defeated.

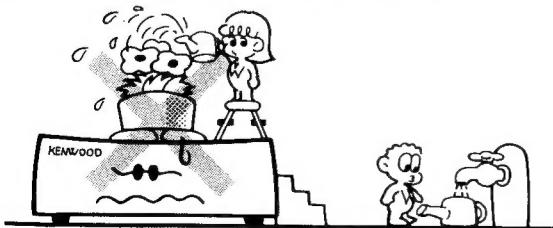
**4. Ventilation** — The unit should be situated so that its location or position does not interfere with its proper ventilation.

To maintain good ventilation, do not put records or a table-cloth on the unit. Place the unit at least 10 cm away from the walls.

Do not use the unit on a bed, sofa, rug or similar surface that may block the ventilation openings.

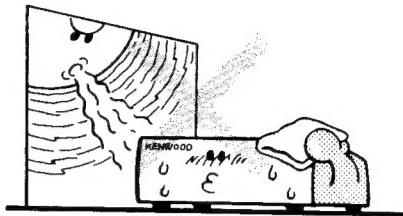


**5. Water and moisture** — The unit should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

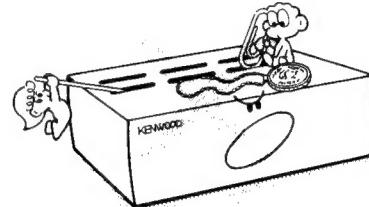


**6. Temperature** — The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

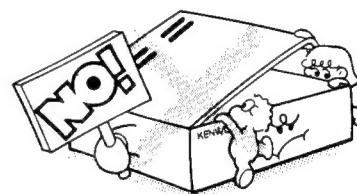
**7. Heat** — The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.



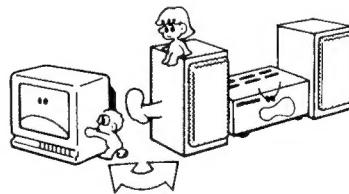
**8. Electric shock** — Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes into contact with the inside of this unit, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.



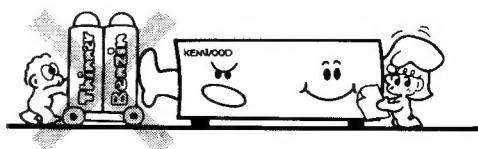
**9. Enclosure removal** — Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.



**10. Magnetic fields** — Keep the unit away from sources of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.



**11. Cleaning** — Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzine, etc. to clean the cabinet. Use a clean dry cloth.



**⚠ Caution : Read this page carefully to ensure safe operation.**

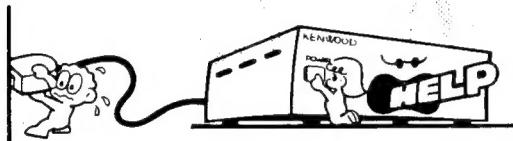
**12. Carts and stands** — An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



**13. Nonuse periods** — The power cord of the unit should be unplugged from the outlet when left unused for a long period of time.

**14. Abnormal smell** — If an abnormal smell or smoke is detected, immediately turn the power OFF and pull out the power cord. Contact your dealer or nearest service center.

### POWER OFF!



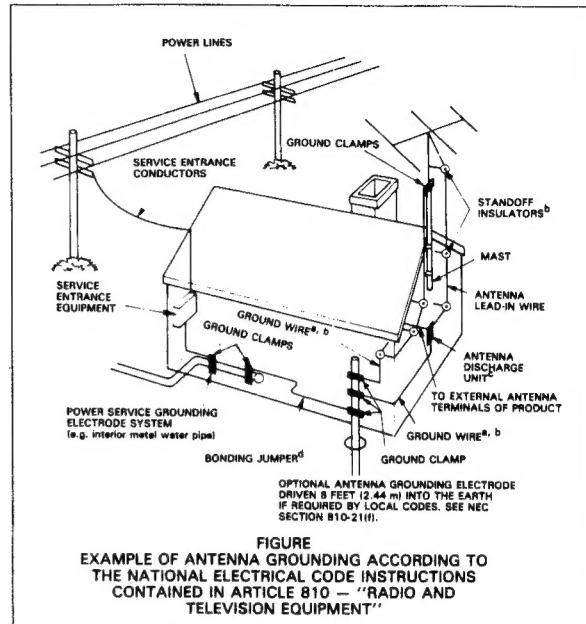
**15. Damage requiring service** — The unit should be serviced by qualified service personnel when:

- A. The power-supply cord or the plug has been damaged; or
- B. Objects have fallen, or liquid has been spilled into the unit; or
- C. The unit has been exposed to rain; or
- D. The unit does not appear to operate normally or exhibits a marked change in performance; or
- E. The unit has been dropped, or the enclosure damaged.

**16. Servicing** — The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

**17. Outdoor antenna grounding** — If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70—1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding con-

ductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.



<sup>a</sup> Use No. 10 AWG (5.3 mm<sup>2</sup>) copper, No. 8 AWG (8.4 mm<sup>2</sup>) aluminum, No. 17 AWG (1.0 mm<sup>2</sup>) copper-clad steel or bronze wire, or larger, as a ground wire.

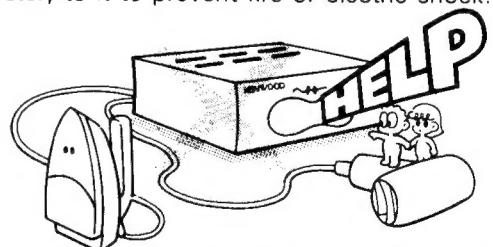
<sup>b</sup> Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 — 6 feet (1.22 — 1.83 m) apart.

<sup>c</sup> Mount antenna discharge unit as close as possible to where lead-in enters house.

<sup>d</sup> Use jumper wire not smaller than No. 6 AWG (13.3 mm<sup>2</sup>) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21(j).

**18. Power lines** — An outdoor antenna should be located away from power lines.

**19. AC outlets** — Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical units, such as an iron or toaster, to it to prevent fire or electric shock.



The maximum capacities indicated for the AC outlets on the rear panel of this unit are as follows.

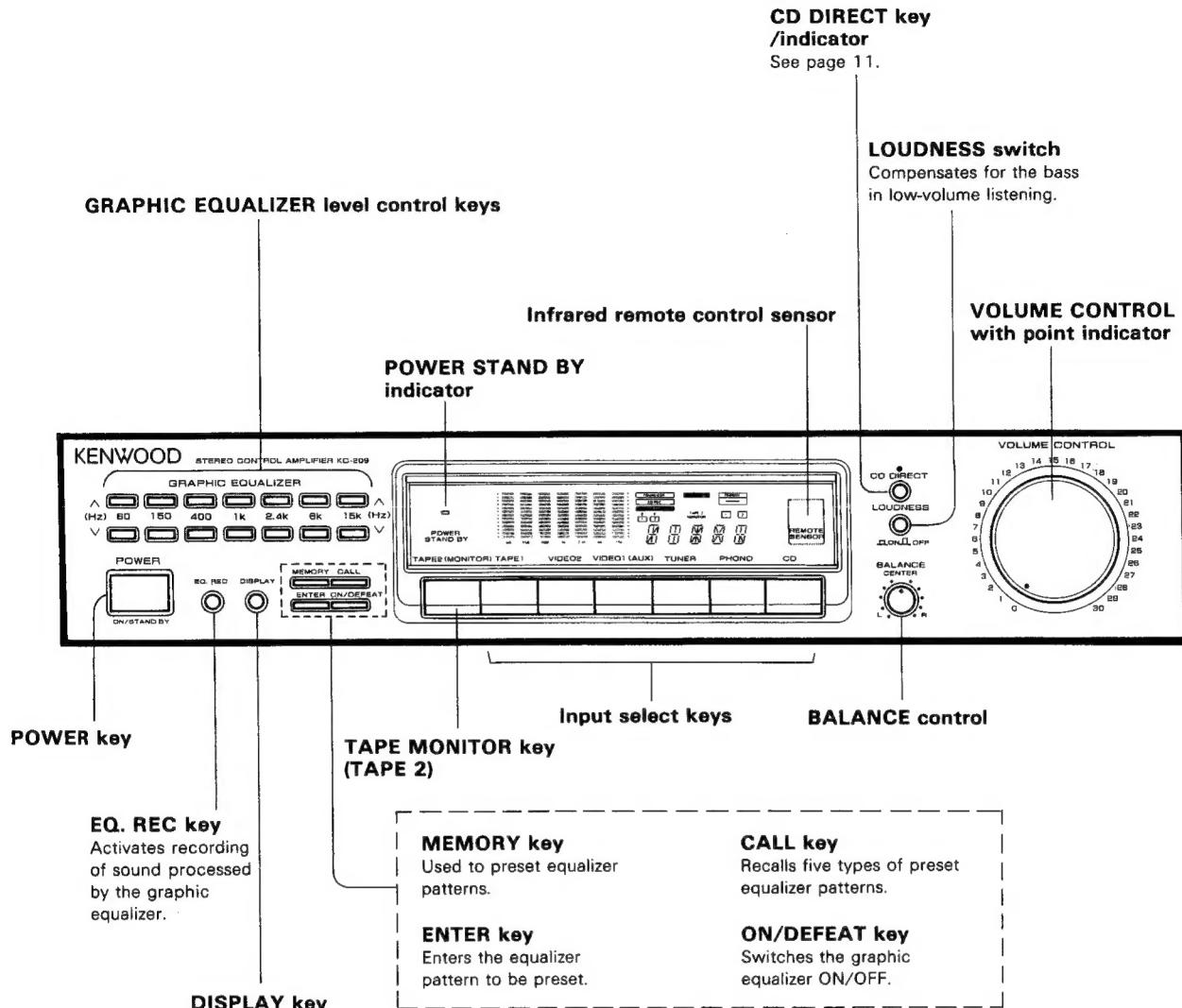
For the U.S.A. and Canada  
SWITCHED outlet; 680 W (Total)

For other countries  
SWITCHED outlet; 420 W

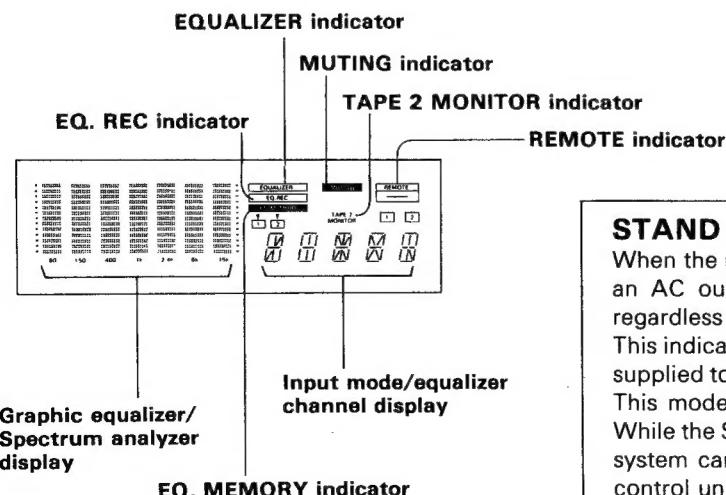
**Notes:**

1. Item 3 is not required except for grounded or polarized equipment.
2. Item 17 and 18 are not required except for units provided with antenna terminals.
3. Item 17 complies with UL-1270 in the U.S.A.

# Controls and indicators



## Display window

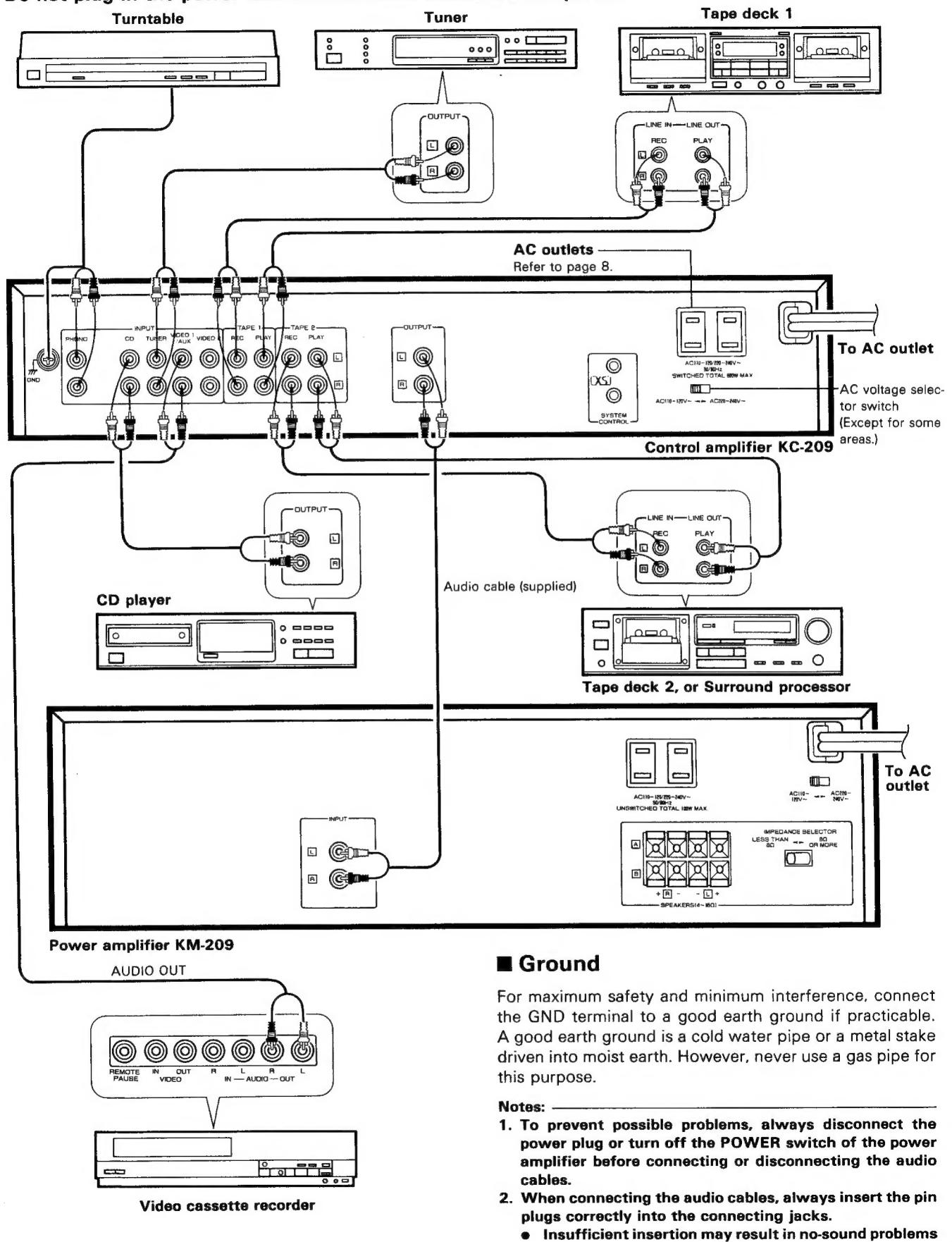


### STAND BY mode of POWER key

When the power cord of this system is plugged into an AC outlet, the STAND BY indicator lights up regardless of the ON/OFF setting of the POWER key. This indicates that a small amount of current is being supplied to the unit to back up the memory contents. This mode is referred to as the STAND BY mode. While the STAND BY indicator is lit, the power of the system can be switched ON/OFF from the remote control unit.

# System connections

Make connection as shown in the diagram below. When connecting the related system components, refer also to the instruction manuals of the related components.  
Do not plug in the power lead until all connections are completed.



## ■ Ground

For maximum safety and minimum interference, connect the GND terminal to a good earth ground if practicable. A good earth ground is a cold water pipe or a metal stake driven into moist earth. However, never use a gas pipe for this purpose.

### Notes:

1. To prevent possible problems, always disconnect the power plug or turn off the POWER switch of the power amplifier before connecting or disconnecting the audio cables.
2. When connecting the audio cables, always insert the pin plugs correctly into the connecting jacks.
  - Insufficient insertion may result in no-sound problems or generation of noise.

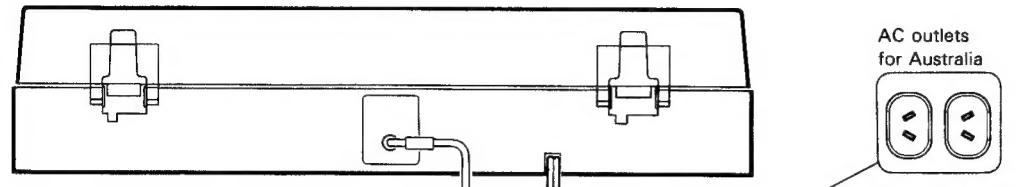
# System control operation

## Connection

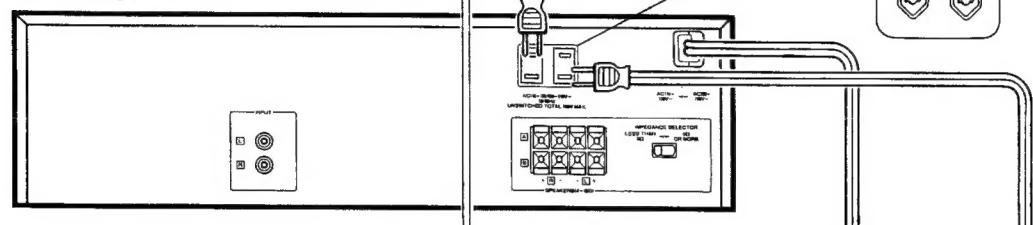
Using the system control cords provided with KENWOOD system component models, make connections as shown below.

(For connections of the audio cords, refer to the "System connections" diagram.)

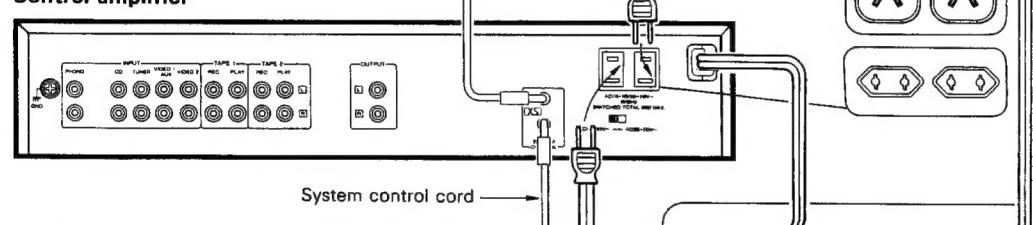
### Turntable



### Power amplifier

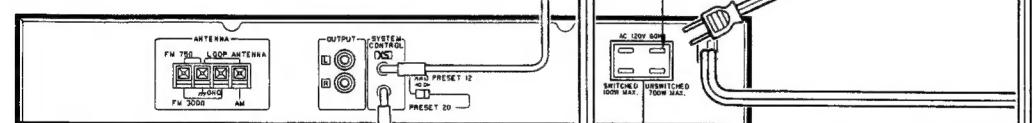


### Control amplifier



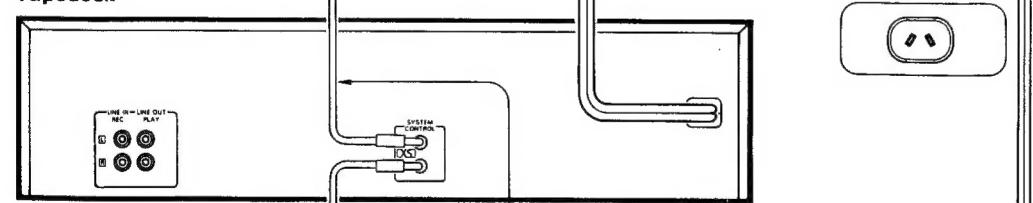
Connect to the  
"UNSWITCHED"  
outlet.

### Tuner

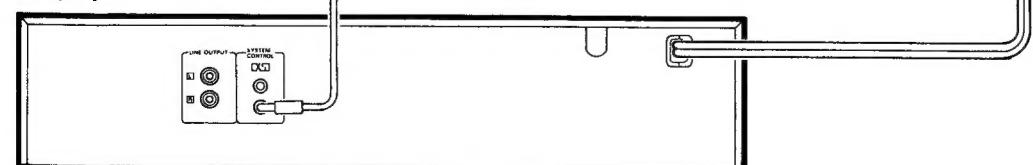


To a wall  
AC outlet

### Tapedeck



### CD player



#### Note:

Do not connect the system control cord to the tape deck connected to the TAPE 2 jacks.

## Operation

By connecting this unit to other KENWOOD system components equipped with SYSTEM CONTROL terminals, such as a tuner, tape deck, CD player and/or turntable, the following convenient operations will be available.

### 1. Automatic play operation

When starting play with the turntable, tape deck, or CD player connected to this unit, press the desired input selector keys on the amplifier. The turntable, tape deck, or CD player will automatically enter play mode.

In the same way, pressing the Play key of the turntable, tape deck, or CD player will automatically switch the input selector on the amplifier to the component on which the Play key is pressed.

### 2. Synchro recording

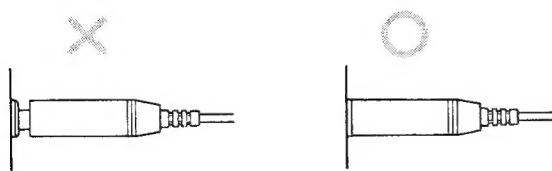
To record the sound from the CD player or turntable onto a tape with the tape deck, press the CD or PHONO of the input selector keys and load a CD or record. Set the tape deck to rec pause mode, then press the Play (START) key of the CD player or turntable. The tape deck will start recording automatically, synchronized with the CD player or turntable starting play.

For more details, refer to the instruction manual of the tape deck.

### 3. Remote control

When the amplifier, tuner, tape deck, CD player, and turntable are connected via the system control cords, these components can be controlled from the remote control unit supplied with this unit.

## ■ Connection of the audio cords and system control cord



Make sure that the right and left audio cords are connected correctly as in the figure.

If the system control cord and audio cords are not connected properly, the automatic system governing remote control and system functions will not operate.

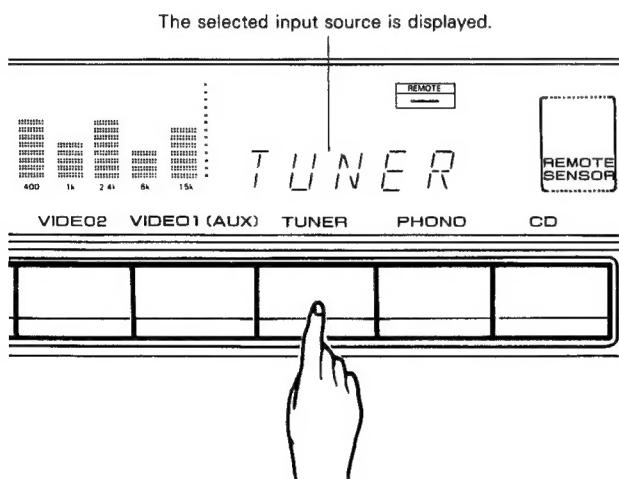
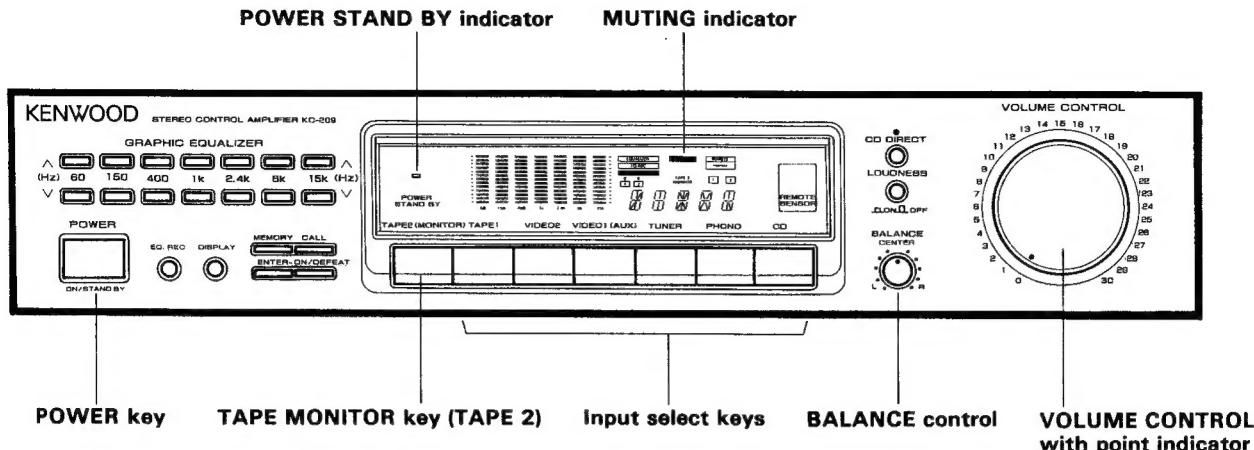
- Be sure to insert the system control cord plugs fully into the SYSTEM CONTROL terminals.

#### Notes:

- System control operation of the unit connected to the TAPE 2 jacks cannot be carried out.
- For connections of the audio cords, refer to the "System connections" diagram.
  - If the system control cords, audio cords and ground lead cord are not connected properly, the automatic system governing remote control and system functions will not operate.

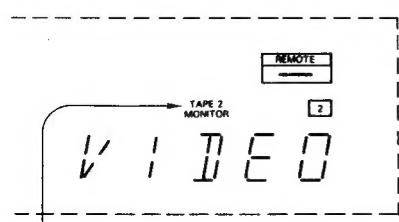
- If the components connected to this unit are not KENWOOD system components, do not connect anything to the SYSTEM CONTROL terminals.

# Operating instructions



## To mute the sound temporarily Press the MUTE key, on the remote control unit.

- The MUTING indicator blinks, and the output is muted.
- When the MUTE key is pressed again, the MUTING indicator disappears and the previous output level is resumed.
- The muting indicator also blinks (for approx. 5 seconds) when the muting function is engaged immediately after the power turned ON.



## ■ Basic operation

### 1. Press the POWER key to ON.

- The display lights and the unit becomes operative.
- Pressing the key again switches the power OFF.
- When the components are connected as shown on page 8, all of them can be switched ON/OFF by this POWER key.

### 2. Press one of the input select keys to select the input source to be played.

- If the system control cord has been connected to the selected source component, it starts play due to the Automatic Play operation feature.
- With the Automatic Play operation feature, when one of the source components is started to be played, the corresponding input selector is automatically switched to the source.
- The selected input source is shown on the display.

### 3. If automatic play operation using the system control cords has not been set, start playing the source component selected.

### 4. Adjust the output level with the VOLUME CONTROL knob.

- When one of the VOLUME CONTROL keys on the remote control unit is pressed, the VOLUME indicator blinks and the VOLUME CONTROL knob is rotated.

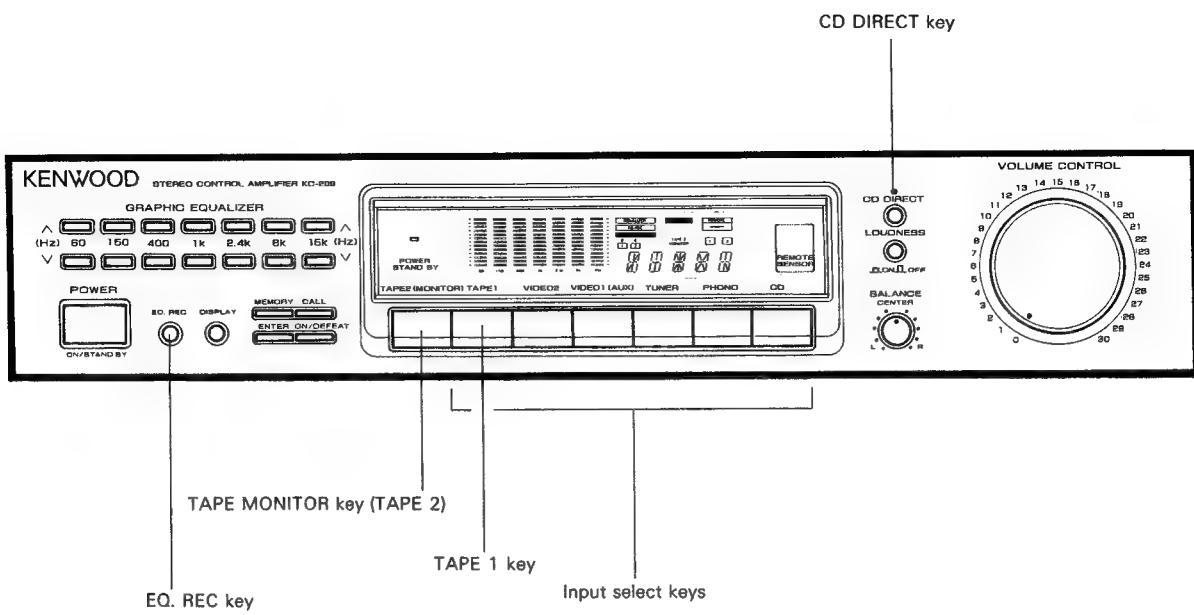
### 5. Adjust the balance of the left and right output levels with the BALANCE control.

### 6. Adjust the tone referring to the description in the "Graphic equalizer" section.

- The graphic equalizer effect can be switched ON/OFF by pressing the ON/DEFEAT key.

#### Notes:

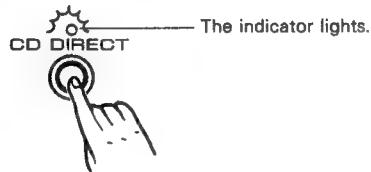
1. The CD DIRECT key should usually be set to OFF (with the indicator not lit).
2. The setting of the input select key is backed up for a few days even when the POWER plug is disconnected. After this period, the TUNER is automatically selected when the power is supplied.
3. When the TAPE 2 key is set to ON, the program source selected with input select key cannot be heard from the speakers. To listen to the program source other than tape deck 2, be sure to set the TAPE 2 key to OFF.



## ■ Operations using CD DIRECT key

To enjoy the high sound quality of CD with more fidelity:

### 1. Press the CD DIRECT key.



### 2. Play the CD player.

- The CD DIRECT key is given priority over the setting of the input select keys.
- The graphic equalizer cannot be used while the CD DIRECT key is ON.
- To cancel the CD DIRECT input, press the CD DIRECT key again or press one of the input select keys (except CD and TAPE 2 keys). The input will be switched to the source indicated on the display.

To listen to the CD direct sound while recording another source:

- Press the input select key of the source to be recorded.
  - The selected input source name is shown on the display.
- Play the source to be recorded, and record it on the tape deck connected to the TAPE 1 jacks.
  - When the EQ. REC key is pressed, sound to which the graphic equalizer effect is applied can be recorded.
- Press the CD DIRECT key.
- Play the CD player.

Note: \_\_\_\_\_

This function is available only when the components are connected via the system control connection.

## ■ To record program source

- Select the program source to be recorded with the input select keys (TUNER, CD, PHONO, VIDEO 1 [AUX], VIDEO 2).
- Play the program source.
- Set tape deck 1 and/or tape deck 2 to record mode.
- To equalize the recording sound, press the EQ. REC key and adjust the GRAPHIC EQUALIZER controls.

Note: \_\_\_\_\_

Sound processed by the equalizer sound can only be recorded with tape deck 1.

## ■ Dubbing from tape deck 2 to tape deck 1

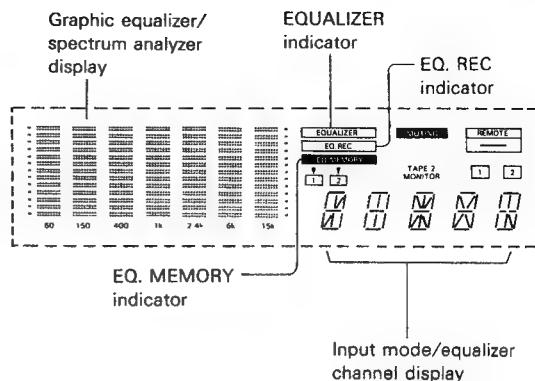
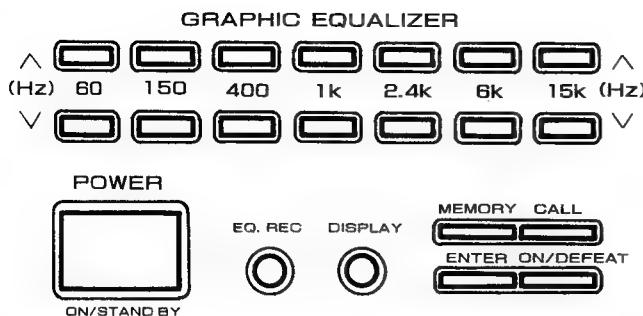
- Press TAPE 2 key and an input select key other than TAPE 1.
- Set tape deck 2 to play and tape deck 1 to record.
- To equalize the recording sound, press the EQ. REC key and adjust the GRAPHIC EQUALIZER controls.

Notes: \_\_\_\_\_

- Do not press the TAPE 1 input select key during dubbing.
- To listen to the equalized recording sound, press the ON/DEFEAT key.

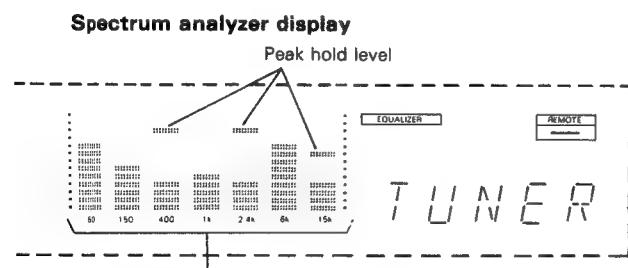
## Operating instructions

### Graphic equalizer



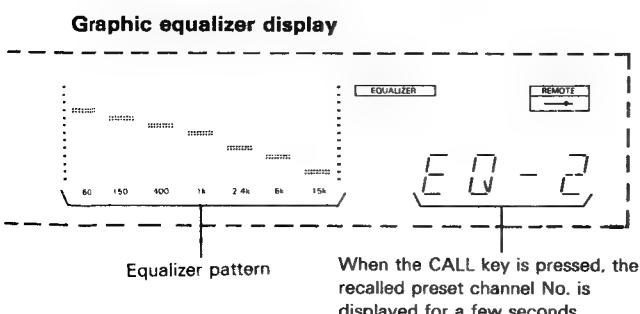
#### ■ How to apply the equalizer effect to the sound

1. Press the **ON/DEFEAT** key.
  - The EQUALIZER indicator lights up.
2. By pressing each of the 7-band equalizer level control keys, create the equalizer pattern which provides the desired tone.
  - Pressing the upper segment of an equalizer level control key increases the level of the frequency band in +2 dB increments up to +12 dB.
  - Pressing the lower segment of an equalizer level control key decreases the level of the frequency in -2 dB decrements down to -12 dB.
  - For reference in creating desired tones, read "Functions of the Graphic Equalizer" and "Sound equalization" sections on page 13.
  - If up to 5 equalizer patterns have already been preset in the memory, they can be recalled in sequence by pressing the CALL key.



Signal levels of frequency bands

- The levels vary according to the input signal.



#### ■ How to store the graphic equalizer patterns

This unit allows you to store up to 5 equalizer patterns in memory for instant recall.

1. Press the **DISPLAY** key to set the display to the graphic equalizer mode.
2. Adjust the **GRAPHIC EQUALIZER** level control keys to obtain the desired equalizer pattern.
3. Press the **MEMORY** key. The **MEMORY** indicator lights up in the display.
4. Within approx. 5 seconds after pressing the **MEMORY** key, press the **CALL** key to select the desired equalizer channel (EQ-1 to EQ-5) in which you want to store the equalized pattern.
5. Press the **ENTER** key to store the equalized pattern in memory.
6. To recall a preset equalizer pattern which has already been stored, press the **CALL** key.

#### ■ Display window

##### Spectrum analyzer display:

To display, press the **DISPLAY** key to change the display to the spectrum analyzer mode.

It displays the output level for each frequency of the program source signal selected by the input selector keys.

##### Graphic equalizer display:

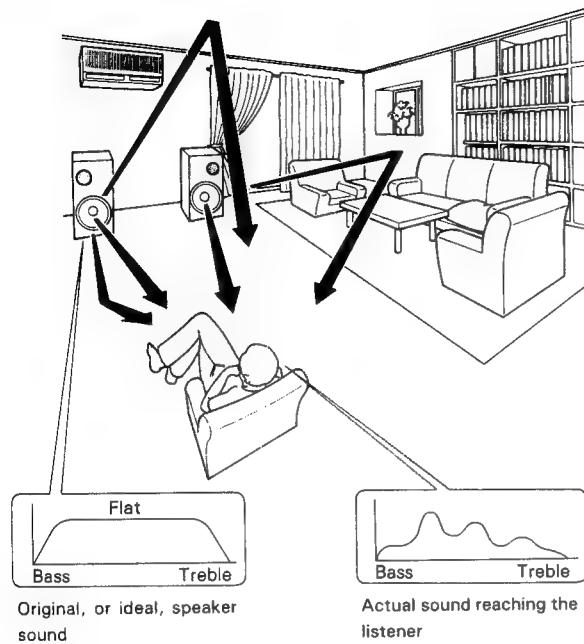
Press the **DISPLAY** key to change the display to the graphic equalizer mode.

Even while the spectrum analyzer display mode is activated, the display enters the graphic equalizer mode for approx. 5 seconds in the following cases:

1. When the **POWER** key is turned ON.
2. When any of the **GRAPHIC EQUALIZER** level control keys is pressed.
3. When the **MEMORY** key is pressed.
4. When the **CALL** key is pressed.

In these cases, the spectrum analyzer display will resume approx. 5 seconds later.

## ■ Functions of the graphic equalizer



### Compensation for the audio characteristics of the listening room

The listening room may contain several objects. Some of them reflect sound and some absorb sound, thus the sound reaching your ears is considerably affected by these objects. In such cases, the graphic equalizer can be used to adjust the frequency response of the room for a flat response from low to high frequencies.

- Low frequencies are absorbed by beds, chairs, etc.
- High frequencies are absorbed by curtains, screens, etc.
- The room structure can cause the low frequencies to be unclear, or the sound level to increase or decrease depending on the frequency.

### Adjustment of sound to your individual taste

When the reproduced sound contains several musical instruments and voices, the graphic equalizer allows you to enhance or attenuate the sound of specific instruments or voices.

## Sound equalization

### ● Super bass range (60 Hz)

When this control is moved up, the bass instrument (double bass, bass drums, or pipe organ, etc.) sound is increased.

When the super bass sound is boomy, move this control down.

### ● Bass range (150 Hz)

Usually, the listening room resonance frequency is in this range.

To eliminate bass resonance, move this control down.

### ● Mid-bass range (400 Hz)

This range is the basis of music. Whether the sound is rich or not, depends on this range. When the playback sound is not so good, move this control up.

### ● Mid range (1 kHz)

When this control is moved up or down, the baritone or soprano voice is emphasized/de-emphasized. This range is related to the "presence" of music.

### ● Mid-high range (2.4 kHz)

This range is related to stimulous and metallic sound. When this range is well compensated, vivid sound can be obtained.

### ● High range (6 kHz)

This frequency range is related to the hardness of the sound. When this control is moved up, strings or brass instruments, such as flutes or piccolos, are emphasized. When the control is moved down, the sound will be more soothing.

### ● Super high range (15 kHz)

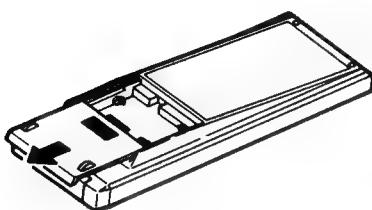
This frequency range is related to the details of the music. When this control is moved up, super high frequency instruments, such as triangles or cymbals, are emphasized, resulting in wide sound and echoes.

# Remote control operation

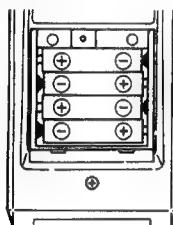
## ■ Loading batteries into the remote control unit

### 1. Remove the battery cover.

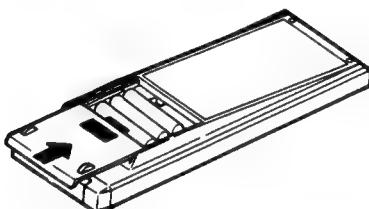
While gently pressing the battery cover located on the rear of the remote control unit, open it in the direction of the arrow.



### 2. Insert four R03 size batteries. Take care to respect the battery polarity (+, -).



### 3. Be sure to close the cover after inserting.



#### Note:

The batteries provided are to be used for checking the remote control operations. Their service life may be short.

## ■ Battery replacement

1. If the TRANSMIT indicator will not light up when an operation key is pressed, the batteries may be exhausted. In this case, replace them with new batteries. It is recommended to use alkaline batteries (LR03) with long life.

2. The programmed contents are not immediately lost when the batteries are removed for replacement. However, they could be lost if the unit is left without batteries for more than 3 minutes. In such a case, the programming should be performed again. The function signals of the non-learning, or fixed, keys are not lost even in this case.

#### Note:

Avoid using old and new batteries together, as this may cause corrosion.

## ■ Operation

### 1. Connect the power plug of the amplifier to an AC outlet.

- This enters the amplifier to power standby mode.

### 2. Press the POWER key on the remote control unit or the POWER key on the amplifier.

- This unit enters the amplifier to power ON mode.

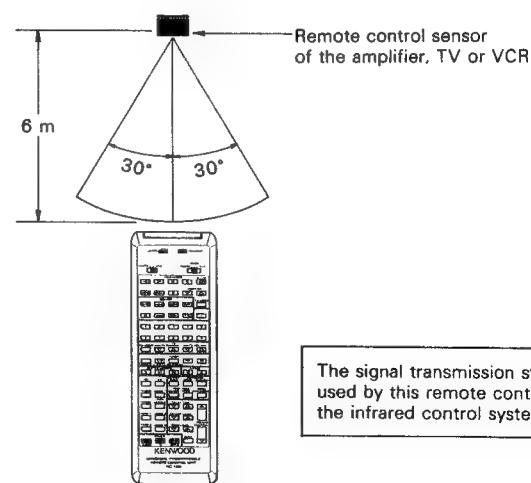
### 3. Operate with the keys of the remote control unit.

- After pressing one of the operation keys, when the next operation is required, press the next operation key firmly after an approx. 1 second interval. If the next operation key is pressed immediately after the previous key, misoperation may result.

## ■ Usable range of the remote control unit

The usable range of the remote control unit may differ with temperature, humidity, or operating conditions. However, it is defined approximately as shown in the figure below:

### For controlling the amplifier, TV and VCR

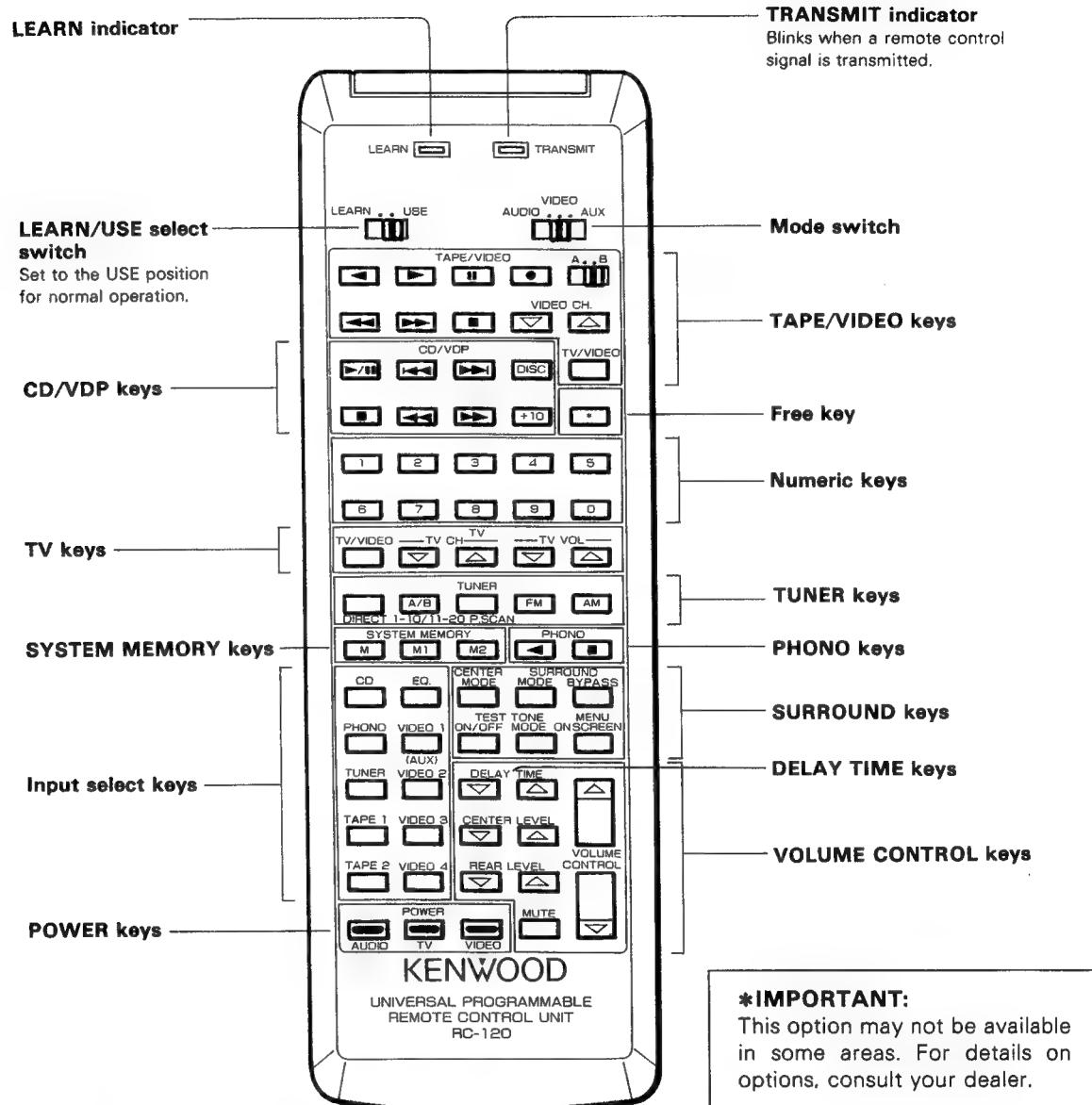


#### Note:

Malfunction may occur in case direct sunlight or the light of a high frequency lighting fluorescent lamp enters the remote control light receptor. In such a case, change the installation position of the unit so that the malfunction does not occur.

The remote control unit (RC-120) is capable of the remote control of this unit as well as other KENWOOD system components connected to this unit via system control cords, KENWOOD \*VCR and \*TV. In addition, it is also possible to program the remote-controllable functions of other A/V components in the memory of RC-120, making it a multi-purpose remote controller for the whole of your system.

## Names and operation of controls



### ■ Remote control operation

1. The whole of the keys can be used in three ways (three sides) by selecting the mode switch position. The AUDIO and VIDEO sides contains the initial programming of KENWOOD-original remote-control codes. (Please refer to "Original function of keys" on page 16.)



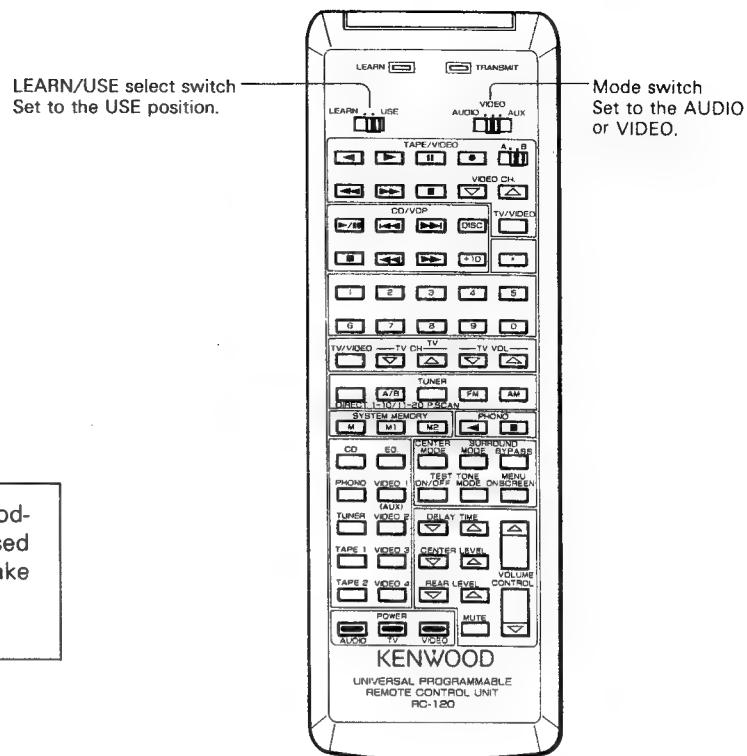
- AUDIO position: For the remote control of KENWOOD system components and KENWOOD TV.
- VIDEO position: For the remote control of KENWOOD VCR, KENWOOD TV and part of KENWOOD system components.
- AUX position : All keys are available, that is, able to store the programming of other remote control functions.

2. The remote control functions of other A/V components can also be programmed under the keys on the AUDIO and VIDEO sides as well as on the AUX side. However, when any information is programmed under a key on the AUDIO or VIDEO side, the original function pre-programmed under that key becomes unavailable.

3. For the programming method, please refer to page 19.

## Remote control operation

### ■ Original function of keys

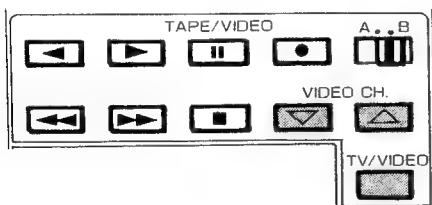


If any of the following KENWOOD component models is used, this remote control unit cannot be used to control the CD manual search function or to make entries with the numeric keys (1 to 0 and +10):  
\* DP-M97, DP-57, DP-47

### ■ TAPE/VIDEO control keys

#### TAPE deck control keys

(Mode switch: AUDIO)



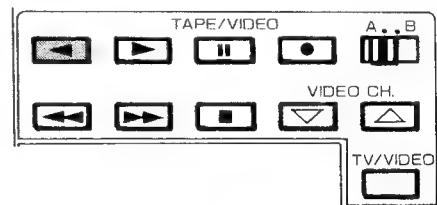
Use the A/B select switch to specify the A deck or B deck of a dual-transport double cassette deck.  
The darkened keys (marked "■") do not function at this time.

**Note:**

**When it is necessary to press the fast forward key after the rewind key, be sure to press the stop key before pressing the fast forward key.**

#### VIDEO deck control keys

(Mode switch: VIDEO)



The darkened keys (marked "■") do not function at this time.  
When remotely controlling the \*KV-D957S from KENWOOD (for U.S.A. and military), set the A/B select switch to A.

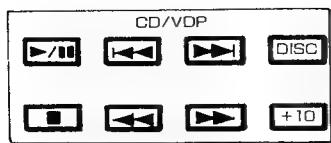
#### VIDEO CH keys:

Pressing the  $\triangle$  key shifts the channel tuned on the VIDEO deck upward, and pressing the  $\square$  key shifts it downward.

#### TV/VIDEO key:

Every time this key is pressed, the output from the video deck is switched between the TV channel RF output and video output.

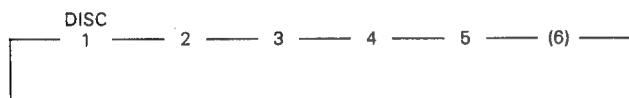
## ■ CD player control keys



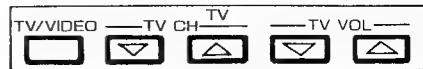
### Mode switch: AUDIO or VIDEO

These keys allow the same operations as the keys with the same names on the CD player.

The DISC key is for use exclusively with a multiple CD player. Pressing the DISC key allows one of DISC 1 to DISC 6 to be selected in the following cycle.



## ■ TV set control keys



### Mode switch: AUDIO or VIDEO

#### TV VOL keys:

Pressing the key increases the volume of the TV set, and pressing the key decreases it.

#### TV CH keys:

Pressing the key shifts the channel tuned on the TV set upward, and pressing the key shifts it downward.

#### TV/VIDEO key:

Every time this key is pressed, the input to the TV set is switched between the TV signal and the external video signal.

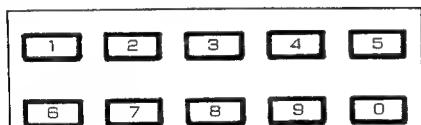
## ■ TUNER control keys



### Mode switch: AUDIO or VIDEO

These keys have the same functions as the keys with the same names on the tuner unit.

## ■ Numeric keys (1 to 0)



### Mode switch: AUDIO

When the CD or TUNER input selector key is selected, these keys can be used in place of the numeric keys on the CD player or tuner, respectively.

### Mode switch: VIDEO

The numeric keys can be used in place of the TV channel select keys.

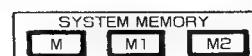
## ■ Turntable (PHONO) control keys



### Mode switch: AUDIO or VIDEO

The play and stop keys are provided.

## ■ SYSTEM MEMORY keys

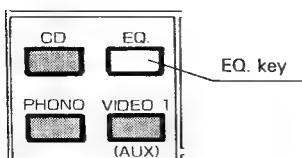


### Mode switch: AUDIO or VIDEO

These keys are not used with this unit.

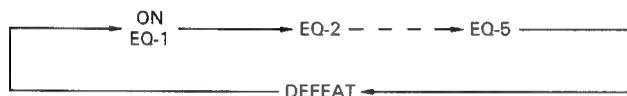
## Remote control operation

### ■ Equalizer key

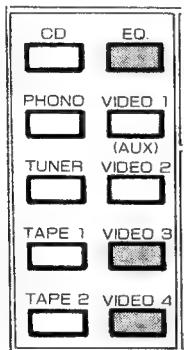


#### Mode switch: AUDIO or VIDEO

Every time the EQ. key is pressed, the equalizer of this unit can be switched ON/DEFEAT or preset equalizer patterns can be changed over in the following cycle.



### ■ Input selector keys

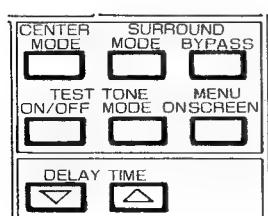


#### Mode switch: AUDIO or VIDEO

These keys have the same functions as the input selector keys of this unit.

The VIDEO 3 and 4 keys are not used with this unit.

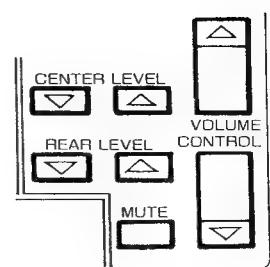
### ■ SURROUND keys & MENU ON SCREEN key



#### Mode switch: AUDIO or VIDEO

These keys are not used with this unit.

### ■ Volume level keys



#### Mode switch: AUDIO or VIDEO

##### VOLUME CONTROL keys:

Pressing the key rotates the VOLUME CONTROL on the main body of the amplifier clockwise to increase the volume, and pressing the key rotates it counterclockwise to decrease the volume.

##### CENTER LEVEL keys:

These keys are not used with this unit.

##### REAR LEVEL keys:

These keys can be used in place of the VOLUME CONTROL on the AV SURROUND PROCESSOR (\*SS-79).

##### MUTE key:

The MUTE key is not provided on the main body. Muting can be controlled only from the remote control.

### ■ POWER keys



#### Mode switch: AUDIO or VIDEO

##### AUDIO key:

Switches the power of the amplifier to ON/STANDBY (OFF).

##### TV key:

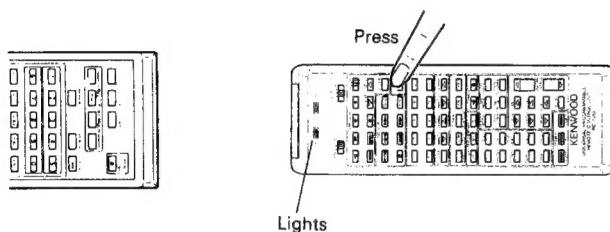
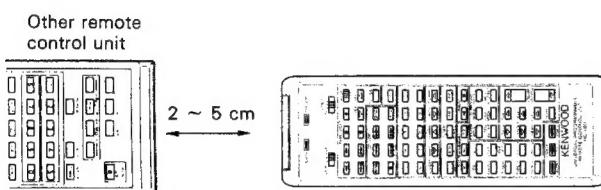
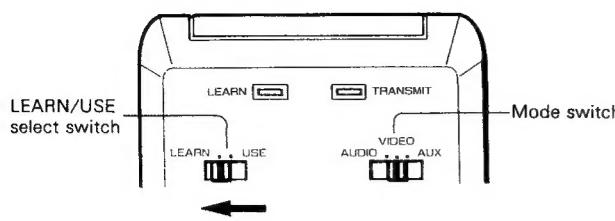
Switches the power of the TV set to ON/STANDBY (OFF).

##### VIDEO key:

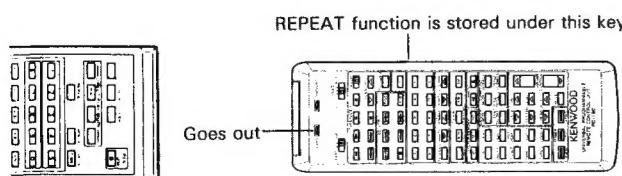
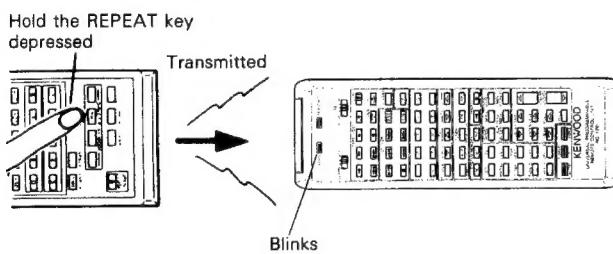
Switches the power of the video deck to ON/STANDBY (OFF).

##### \*IMPORTANT:

This option may not be available in some areas. For details on options, consult your dealer.



Example: To program the REPEAT key of the other remote control unit



## ■ To program the remote control functions of other remote control units into the RC-120

Most audio/video components use the same infrared remote control coding system. Therefore, the RC-120 can memorize most of the functions of other remotely-controlled components. Please read this manual and the instruction manuals provided with your other A/V components carefully before programming the remote control functions of the other components.

**1. Set the LEARN/USE select switch to the LEARN position, and set the mode switch to the desired position.**

**2. Place the RC-120 and the other remote control unit so that their heads (transmission ends) face each other. (Leave a distance between the units of about 2 ~ 5 or 0.8 ~ 2 inches.)**

**3. Press one of the learning keys on the RC-120. The LEARN indicator will light.**

**4. Press the key to be programmed on the other remote control unit and hold it depressed.**

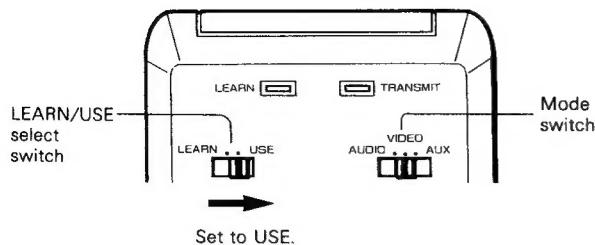
**5. When the LEARN indicator on the RC-120 blinks twice and then goes out, the programming operation is completed. When the programming operation is completed, release your finger from the key on the other remote control unit.**

- To program other remote control function, repeat the procedure outlined in steps 3. to 5.

### Note:

**Be sure to hold the key to be programmed on the other remote control unit depressed until the LEARN indicator goes out.**

## Remote control operation

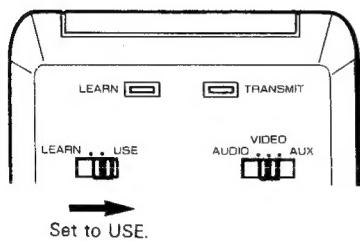


### ■ To check the programmed contents during programming

1. Check that the LEARN/USE select switch is in the USE position.
2. Press the key to be checked.
3. Verify that the component to be operated works correctly.

### ■ To change the programmed contents

Perform the programming operation again. The previously programmed contents will be canceled automatically, and the newly programmed contents will be maintained in memory.



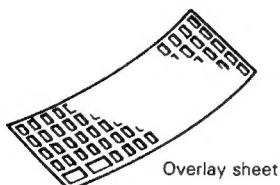
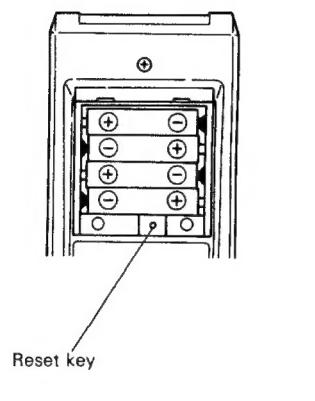
### ■ Normal operation of the remote control unit

1. Set the LEARN/USE select switch to the USE position.
2. Press a key under which another remote control function has been programmed.  
The TRANSMIT indicator blinks and the target component operates as intended.

### ■ To erase the entire programmed contents

With a single procedure, you can erase all of the remote control functions which have been programmed under keys in each mode (AUDIO, VIDEO, and AUX).

1. Set the LEARN/USE select switch to the LEARN position.
2. Press a programmable key (any programmable key may be pressed).
  - The LEARN indicator lights.
3. Remove the battery cover from the back of the remote control unit.
4. Press the reset key located inside the battery case using the tip of a ball-point pen or similar instrument.
  - All of the programmed contents are erased and the remote control unit returns to its initial condition.



### ■ Overlay sheet

The provided overlay sheet offers a convenient way to record and recall the contents programmed under the various operation keys.

Write the programmed key contents on the overlay sheet with an oil-based felt-tipped marker or pencil. To erase, use a conventional eraser.

#### Notes:

1. If the optical output level of the other remote control unit is high, programming may not be carried out correctly. If this occurs, separate the RC-120 and the other remote control unit by a greater distance and perform the programming procedure again.
2. If the LEARN and TRANSMIT indicators blink simultaneously during programming, this indicates either that the key being programmed cannot be programmed or that programming has not been performed completely. If this occurs, perform the programming procedure again.
3. Remote control functions using specially-coded signals or signals other than infrared signals cannot be programmed.

Programming is also impossible when the RC-120's memory capacity becomes full.

4. The LEARN indicator goes out 30 seconds after a learning (programmable) key is pressed. After this, programming is impossible. To continue programming, press the learning (programmable) key again.
5. When two or more learning (programmable) keys are pressed at the same time, the remote control function of the other remote control unit will be stored under the key which was pressed last.
6. Do not program the remote control functions of equipment other than A/V components, such as air conditioners, etc.

# In case of difficulty

What appears to be a malfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

## Connection related

Symptom	Cause	Remedy
<b>Power does not turn on or is cut off immediately after it is turned on.</b>	<ul style="list-style-type: none"><li>● The amplifier's AC power cord is plugged into a switched outlet on the tuner.</li><li>● The system control cord is not plugged in securely.</li><li>● The audio cord is not connected.</li></ul>	<ul style="list-style-type: none"><li>● Plug the amplifier's AC power cord into a unswitched outlet on the tuner.</li><li>● Plug the system control cord securely into the system control jack.</li><li>● Connect the audio cord.</li></ul>

## Amplifier and speakers

Symptom	Cause	Remedy
<b>No sound through speakers</b>	<ul style="list-style-type: none"><li>● Speaker cords are unplugged.</li><li>● VOLUME is set at minimum.</li><li>● No input selector switch is in use.</li><li>● MUTING is ON.</li><li>● The SPEAKERS switch is set to OFF.</li><li>● The TAPE 2 key is set to ON.</li></ul>	<ul style="list-style-type: none"><li>● Check the connection between the amp and speakers.</li><li>● Increase volume.</li><li>● Push one of the input selector switches to select the desired program.</li><li>● Switch MUTING OFF.</li><li>● Set the SPEAKERS switch to ON.</li><li>● Set the key to OFF.</li></ul>
<b>No sound through one speaker</b>	<ul style="list-style-type: none"><li>● Speaker cord is unplugged.</li><li>● BALANCE control is turned to one side.</li></ul>	<ul style="list-style-type: none"><li>● Check the connection between the amp and speakers.</li><li>● Adjust the BALANCE control.</li></ul>
<b>Sound volume is small.</b>	<ul style="list-style-type: none"><li>● The equalizer level controls of all bands are set to the minimum levels.</li></ul>	<ul style="list-style-type: none"><li>● Set the equalizer level controls to normal levels.</li></ul>
<b>When the input selector is set to PHONO, a humming sound is heard but music is not heard.</b>	<ul style="list-style-type: none"><li>● The turntable's output cable may be connected insecurely.</li><li>● The turntable's grounding wire may not be connected.</li></ul>	<ul style="list-style-type: none"><li>● Connect the turntable's output cable securely into the PHONO terminal.</li><li>● Connect the turntable's grounding wire to the GND terminal on the amplifier's rear panel.</li></ul>

## Remote control

Symptom	Cause	Remedy
<b>Remote control unit does not function.</b>	<ul style="list-style-type: none"><li>● Batteries are exhausted.</li><li>● System control cord is disconnected from the rear panel terminal.</li><li>● Operating position is too distant from the unit (infrared sensor).</li><li>● Record, tape, or compact disc is not loaded in the component desired to be played.</li><li>● Cassette deck desired to be played is in use for recording.</li><li>● The LEARN/USE select switch is set to LEARN.</li></ul>	<ul style="list-style-type: none"><li>● Replace the batteries with new ones.</li><li>● Connect it firmly. (Refer to P.8, 9.)</li><li>● Use the remote control unit (transmitter) within an operable area.</li><li>● Set the desired source on the component.</li><li>● Wait until the recording is over.</li><li>● Set the LEARN/USE switch to USE.</li></ul>
<b>Volume level does not increase.</b>	<ul style="list-style-type: none"><li>● Volume exceeds the level set at the control amplifier.</li><li>● Muting is activated.</li></ul>	<ul style="list-style-type: none"><li>● Raise the level on the control amplifier.</li><li>● Release it.</li></ul>

Notes:

1. As this system uses microcomputers, it is open to interference from external noise, and may sometimes not function properly. In such a case, unplug the power cord once, and then plug it in again.
2. Do not use contact cleaners because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic components.

# Specifications

## Performance

### Input Sensitivity

PHONO .....	2.5 mV, 47 kΩ
TUNER/AUX/TAPE/CD/VIDEO .....	150 mV, 33 kΩ

### Signal to Noise Ratio (IHF-A)

PHONO .....	79 dB, 2.5 mV input
TUNER/AUX/TAPE/CD/VIDEO .....	103 dB

### Maximum Input Voltage for Phono .....

PHONO .....	130 mV (RMS), T.H.D. 0.03% at 1,000 Hz
TUNER/AUX/TAPE/CD/VIDEO .....	10 Hz – 70 kHz (-3 dB).

### Frequency Response

PHONO .....	RIAA Standard Curve ±0.3 dB (20 Hz – 20 kHz)
TUNER/AUX/TAPE/CD/VIDEO .....	10 Hz – 70 kHz (-3 dB).

### Total Harmonic Distortion

20 Hz ~ 20 kHz .....	0.004% at rated output
Loudness Control .....	+8 dB (100 Hz) (at volume -30 dB)

### Graphic equalizer control

(60 Hz, 150 Hz, 400 Hz, 1 kHz, 2.4 kHz, 6 kHz, 15 kHz) .....	±12 dB
Output Voltage and Impedance .....	TAPE REC: 150 mV/330 Ω PRE OUT: 1000 mV/330 Ω

## General

Power Consumption .....	15 W
Dimensions .....	W: 440 mm (17-5/16") H: 89 mm ( 3-1/2") D: 276 mm (10-7/8")

**Note:** KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

### For CANADA

#### DOC REGULATION

"This digital apparatus does not exceed the CLASS B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian department of communications."

### For the U.S.A.

#### FCC WARNING:

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

#### NOTE:

This equipment has been tested and found to comply with the limits for a CLASS B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment may cause harmful interference to radio communications, if it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.